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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,310	07/28/2000	KENJI NISHI	106827	3797

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EXAMINER

ESPLIN, DAVID B

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/628,310	NISHI, KENJI	
	Examiner	Art Unit	
	D. Ben Esplin	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-24 and 40-47 is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-12, 15-17, 25-29, 32-39 and 48-56 is/are rejected.
- 7) ☒ Claim(s) 6-8, 13, 14, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the embodiment including two focus position-detecting units, and any exposure method must be shown in the form of a flowchart, or the embodiment and method(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

The previously made objection to claims 6-8 is hereby withdrawn in light of the Applicant's arguments filed 7/31/03. However, Examiner points out that the embodiment included in claims 6-8 and shown in FIGS. 12 and 13 is claimed only in conjunction with the embodiment shown in FIG. 8, and is not claimed as a separate method for determining and setting the position of the substrate during exposure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9-12, 15-17, 25-29, 32-35, 36-39, and 48-56 are rejected under 35

U.S.C. 102(b) as being anticipated by Japanese Patent Application Laid-Open 6-283403.

FIG. 20 of Japanese application 6-283403 shows an exposure apparatus including a focus position-measuring unit (focal position detection unit including elements 60-71), and a focusing stage (Z leveling stage 54). Japanese application 6-283403 further shows an inclination angle-measuring unit (focal position detection unit as shown in FIG. 21). FIG. 21 represents the location of a plurality of measuring points at which the height of the surface of the substrate are measured, including a series of points perpendicular to the scan direction, and a series of points parallel to the scan direction. The apparatus of FIG. 20 still further includes a measuring unit (interferometer 57) with a fiducial member (mirror 56) for measuring the X and Y coordinates (or rolling amount) of the stage at all times. FIG. 1 of Japanese application 6-283403 shows an alternative fiducial member (reference mark board 6) for measuring the straightness of the substrate stage.

According to Applicant, Japanese application 6-283403 discloses an exposure method including the steps of measuring a height of the surface of a substrate in front of an exposure area in a relative movement direction (page 3 lines 5-9 of subject application), and setting the positional relationship based on this measurement (page 3 lines 9-13). Since the height and inclination are measured prior to exposure the measuring point would inherently be in front of the exposure area, and would mean that the measurement takes place during scanning of the substrate. Further, since in the method of Japanese application 6-283403 the height and

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inclination (or pitch) of the substrate is continuously being monitored, a plurality of points are created where the height and inclination are measured.

Referring specifically to claims 54-56, these claims are product-by-process claims, meaning that the devices claimed must be materially distinguishable from a device produced by the prior art, and not the processes of their production. Since a device formed using the methods claimed would be indistinguishable from a device formed by Japanese application 6-283403, these claims are also anticipated by Japanese application 6-283403.

Allowable Subject Matter

Claims 18-24 and 40-47 are allowed.

Claims 6-8, 13, 14, 30, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 7/31/03 have been fully considered but they are not persuasive.

Regarding the argument that the objection to the drawings is improper, the language of the MPEP is clear in stating that the drawings must show every claimed feature of the invention in the claims. Therefore Applicant's argument that the methods are fully explained in the specification are immaterial to the objection made by the Examiner. Further, the actions of *other*

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examiners, in *other* applications are in no way binding on the Examiner in the instant case as long as Examiner's actions are proper according to the MPEP and the U.S.C.

Referring to Applicant's argument that 6-283403 does not the second method step of claim 1, page 3 of the Derwent translation of 6-283403 discloses that the apparatus of '403 performs leveling, which means that the positional relationship is set based on information about an inclination angle.

In reference to Applicant's argument that '403 does not teach measuring one of a rolling amount, a pitching amount, and a displacement amount, with the measurement being taken in the direction of the optical axis, as recited in claim 12, is not persuasive because Applicant has read a limitation into the claim that is not present in the claim language. The claim language, as currently constituted does not require the measurement of these variables to be taken in the direction of the optical axis, but instead only requires that the displacement amount that is measured be one of displacement in the optical axis. Thus, Applicant's argument with respect to which direction the measurement is taken in is moot because the grammatical structure of the language does not support Applicant's interpretation.

Further, referring to Applicant's argument that the apparatus of '403 does not suggest positioning the substrate according to "information about an inclination angle" as recited in claim 25, Applicant is referred to page 3 of the translation of '403 wherein it is disclosed that the substrate is leveled.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Ben Esplin whose telephone number is (703) 305-4022. The examiner can normally be reached on Mon.-Fri. (8am-4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell E. Adams can be reached on (703) 308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


DBE

